

## **SUPPORTING INFORMATION**

**HASELHORST, MORENO AND PUNYASENA**

***Variability within the 10-year pollen rain of a seasonal Neotropical forest  
and its implications for paleoenvironmental and phenological research***

**Appendix S3: Supporting Plates S23-S45. Plate images of named and unknown pollen type,**

**Part II.** Scale bars represent 20 µm. Multiple images are provided to highlight the texture and cross-sectional shape of each grain. Images were taken using a Plan-Apochromat SF25 (63x, 1.4NA, oil immersion) lens and a Zeiss AxioCam ICc 3 digital microscope camera.

**Plate S23.** Malpighiaceae: *Byrsonima* sp. (B1-B3); *Hiraea*-type (A1-A3); Malvaceae: cf. *Sida* sp. (C1-C3, image scaled 50%); Malvaceae (Bombacoideae): *Bombacopsis* sp. (D1-D3, image scaled 50%)

**Plate S24.** Malvaceae (Bombacoideae): *Cavanillesia* sp. (B1-B3, image scaled 50%); cf. *Ceiba/Ochroma* sp. (A1-A3, image scaled 50%)

**Plate S25.** Malvaceae (Bombacoideae): cf. *Ceiba/Ochroma* sp. (A1-A3, image scaled 50%); *Pseudobombax* sp. (B1-B3, image scaled 50%); *Quararibea asterolepis* (C1-C5, image scaled 50%)

**Plate S26.** Melastomataceae: *Miconia*-type (A1-A6); Meliaceae: *Cedrela* sp. (B1-B3); *Trichilia* sp. (C1-C3)

**Plate S27.** Meliaceae: *Trichilia* sp. (A1-A6); *Trichilia* sp. (B1-B6)

**Plate S28.** Moraceae/Urticaceae: *Brosimum*-type (A1-A3); *Ficus* sp. (B1-B3); Myristicaceae: *Virola* sp. (C1-C4)

**Plate S29.** Myrtaceae: *Eugenia coloradensis* (A1-A3); *Eugenia* sp. (B1-B3); *Eugenia* sp.2 (E1-E3); *Myrcia* sp. (C1-C3); Nyctaginaceae: *Guapira standleyana* (F1-F4, image scaled 50%); Piperaceae: *Piper* spp. (D1-D3)

**Plate S30.** Poaceae: unknown sp.1 (A1-A3); unknown sp.2 (B1-B3, image scaled 50%); Pinaceae/Podocarpaceae: unknown sp. (C1-C3, image scaled 50%); Proteaceae: cf. *Roupala montana* (D1-D3, image scaled 50%)

**Plate S31.** Rubiaceae: *Alseis* sp. (A1-A3); *Coussarea* sp. (B1-B3); *Faramea occidentalis* (C1-C4); *Faramea* sp. 2 (D1-D3); *Faramea* sp.3 (E1-E3)

**Plate S32.** Rubiaceae: *Genipa* sp. (A1-A6); cf. *Ixora coccinea* (B1-B6)

**Plate S33.** Rubiaceae: *Posoqueria* sp. (A1-A3, image scaled 50%); *Psychotria* sp.1 (B1-B3, image scaled 50%); *Psychotria* sp.2 (C1-C3, image scaled 50%); *Sabicea* sp. (E1-E3); *Tocoyena pittieri* (D1-D3, image scaled 50%)

**Plate S34.** Rubiaceae: *Uncaria tomentosa* (A1-A6); cf. *Warszewiczia* sp. (B1-B3); Rutaceae: *Citrus* sp.1 (C1-C4); *Citrus* sp.2 cf. *Citrus grandis* (D1-D3, image scaled 75%)

**Plate S35.** Rutaceae: *Zanthoxylum* sp.1 (A1-A6); *Zanthoxylum* sp.2 (B1-B3); cf. Rutaceae spp. (C1-C4)

**Plate S36.** Salicaceae: cf. *Casearia* sp. (A1-A6); Sapindaceae: *Paulinia* sp. (B1-B3, image scaled 75%); *Serajnia* sp. (C1-C3, image scaled 75%)

**Plate S37.** Sapotaceae: *Pouteria* sp. (A1-A6); Simaroubaceae: *Quassia* sp. (B1-B3, image scaled 75%); *Simarouba* sp. (C1-C3)

**Plate S38.** Solanaceae: *Solanum* spp. (A1-A7); Tiliaceae: cf. *Apeiba* sp. (B1-B3, image scaled 75%); Urticaceae: *Cecropia* sp. (C1-C3); Vitaceae: *Cissus* sp. (D1-D3, image scaled 75%)

**Plate S39.** Vochysiaceae: *Vochysia* sp. (A1-A3); unknown sp. (B1-B3)

**Plate S40.** unknown sp./cf. *Vismia* sp. (A1-A4); unknown sp./ cf. Rubiaceae spp. (B1-B3); unknown sp./cf. Ochnaceae: *Cespedezia* sp. (C1-C3)

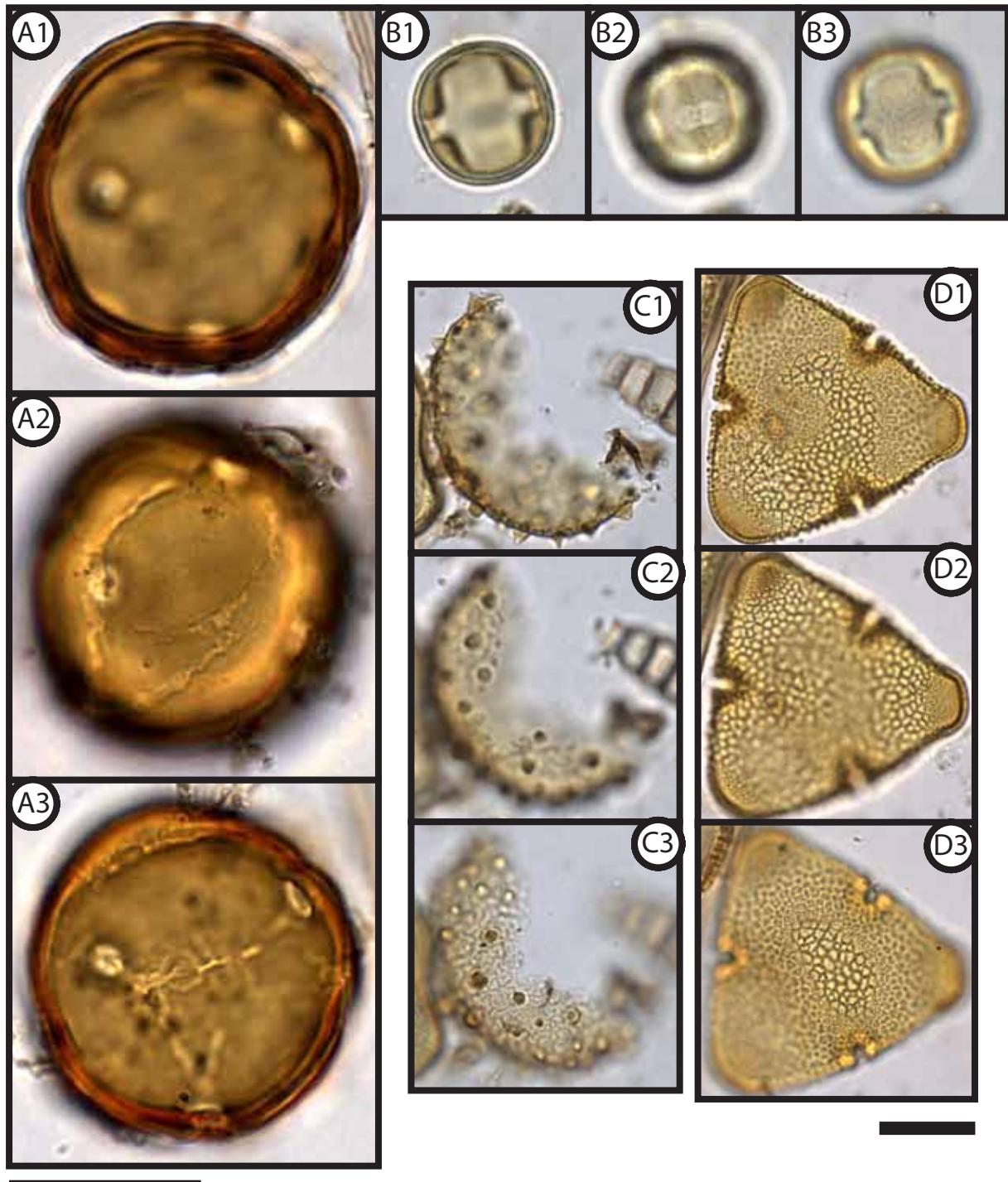
**Plate S41.** unknown sp. (A1-A3); unknown sp. (B1-B3); unknown sp. (C1-C3)

**Plate S42.** unknown sp./cf. Malpighiaceae: *Tetrapteris* sp. (A1-A3); unknown sp. (B1-B6); unknown sp./cf. Rubiaceae spp. (C1-C4)

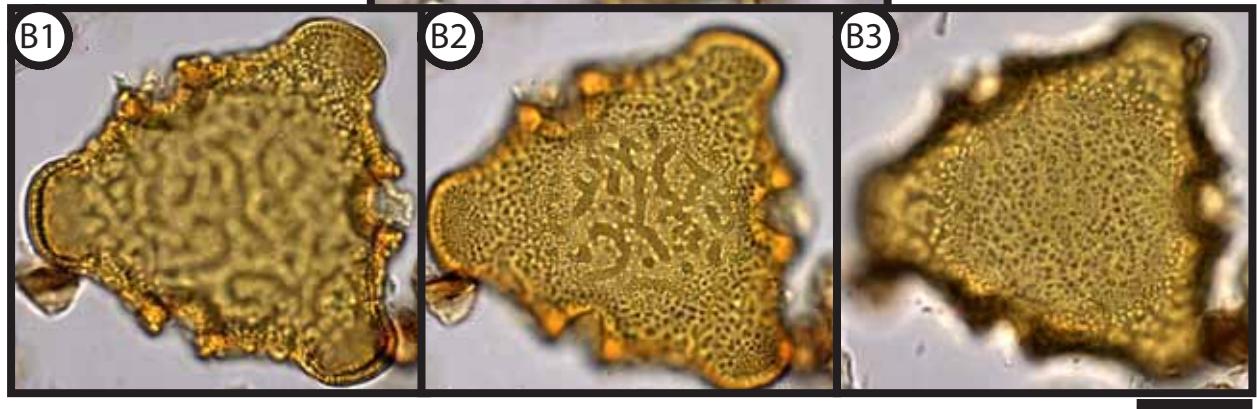
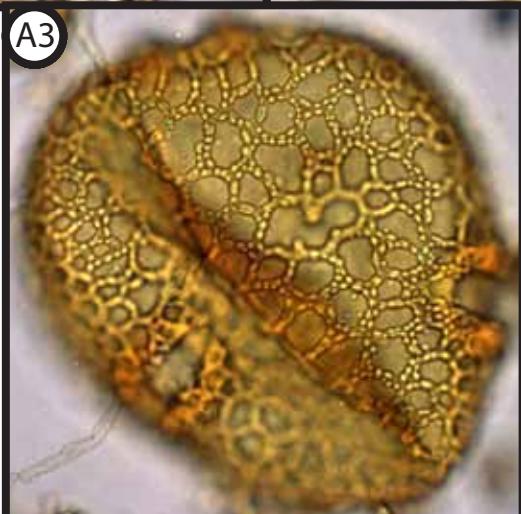
**Plate S43.** unknown sp. (A1-A4, image scaled 50%); unknown sp. (B1-B3, image scaled 50%); unknown sp. (C1-C3, scaled to 75%)

**Plate S44.** unknown sp. (A1-A4) unknown sp. (B1-B3); unknown sp./cf. Lamiaceae: *Hyptis* sp. (C1-C3)

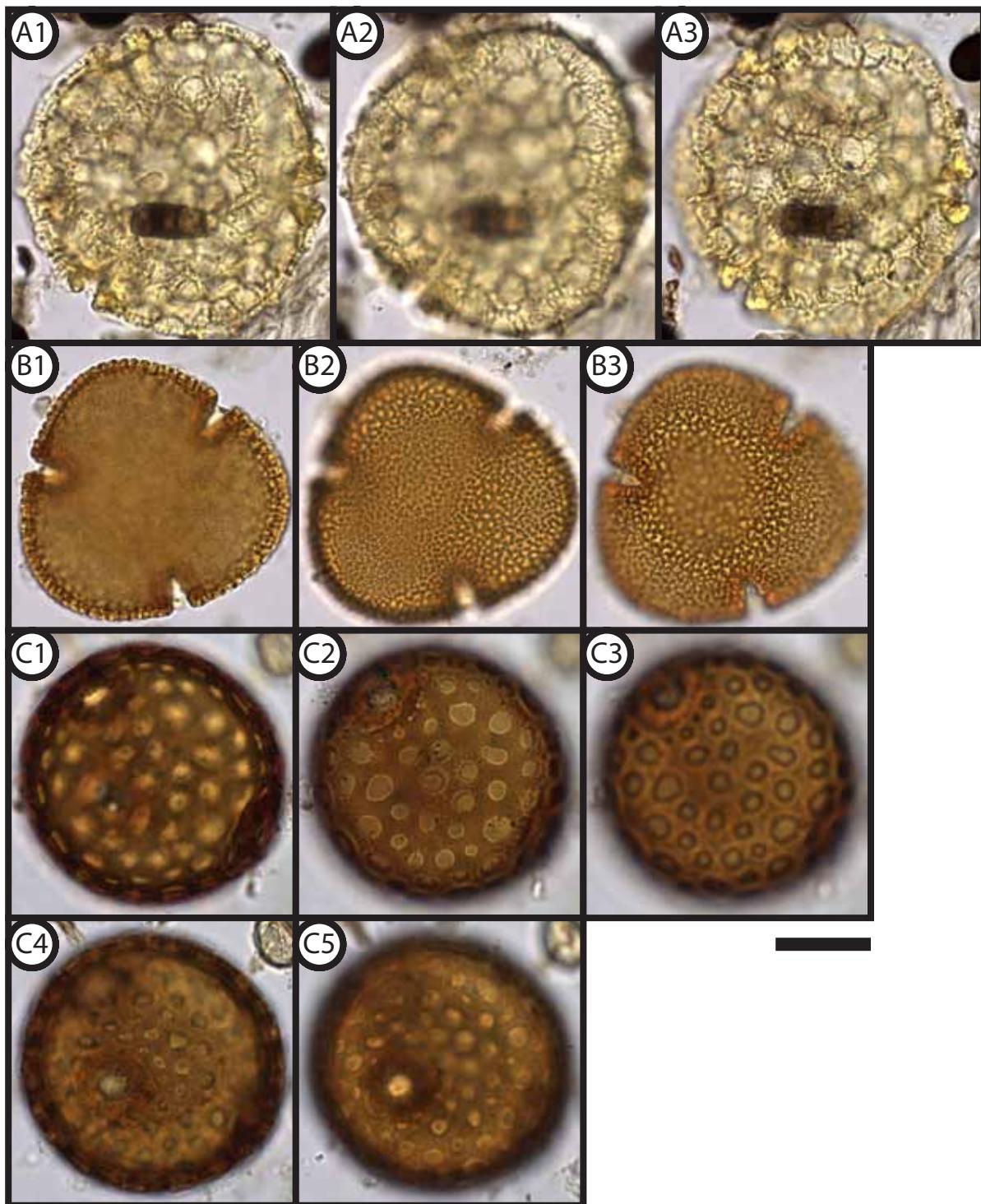
**Plate S45.** unknown sp. (A1-A3); unknown sp./cf. Sterculiaceae: *Melochia* sp. (B1-B5)



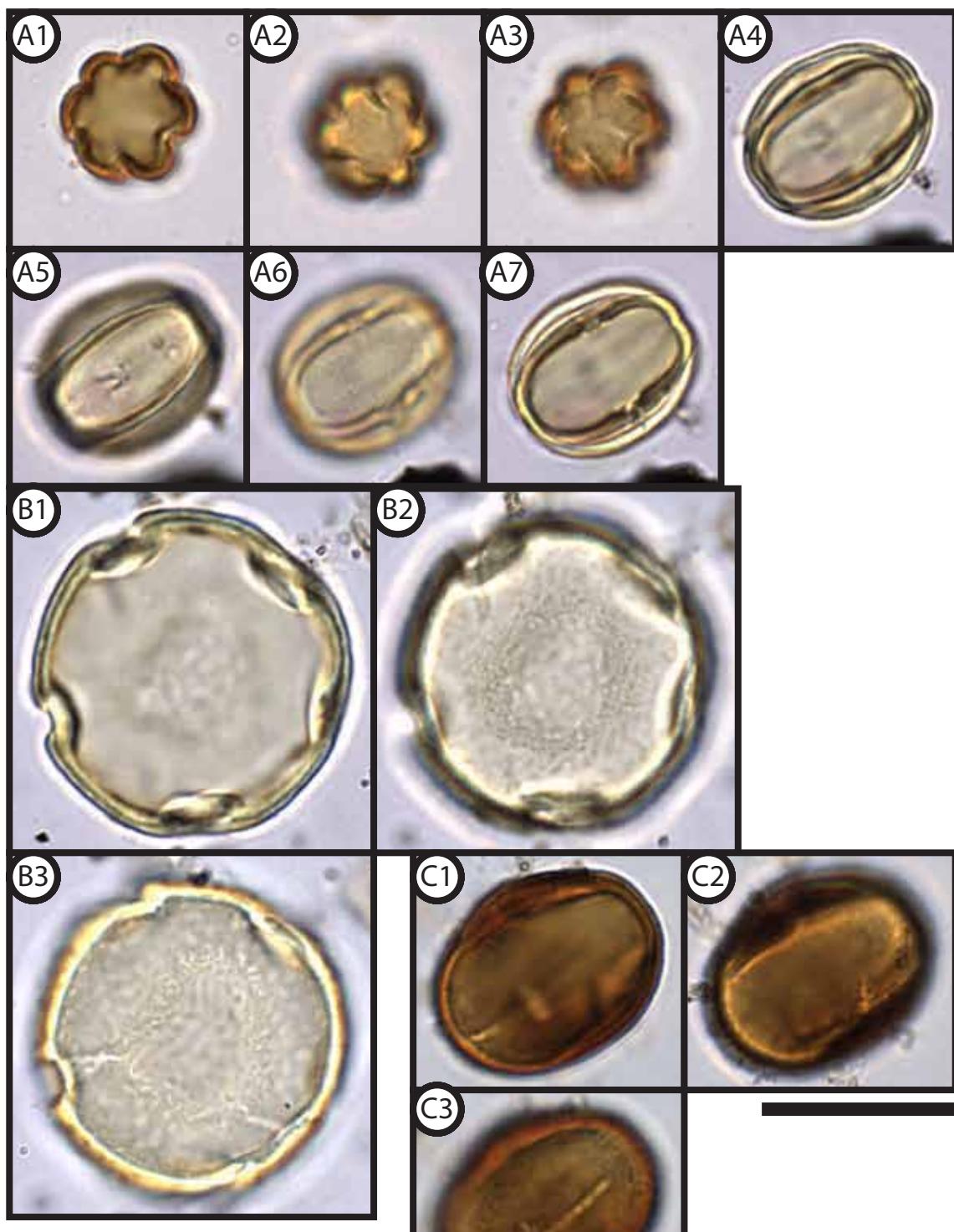
**Plate S23.** Malpighiaceae: *Byrsonima* sp. (B1-B3); *Hiraea*-type (A1-A3);  
Malvaceae: cf. *Sida* sp. (C1-C3, image scaled 50%);  
Malvaceae (Bombacoideae): *Bombacopsis* sp. (D1-D3, image scaled 50%)



**Plate S24.** Malvaceae (Bombacoideae): *Cavanillesia* sp. (B1-B3, image scaled 50%); cf. *Ceiba/Ochroma* sp. (A1-A3, image scaled 50%)



**Plate S25.** Malvaceae (Bombacoideae): cf. *Ceiba/Ochroma* sp. (A1-A3, image scaled 50%);  
*Pseudobombax* sp. (B1-B3, image scaled 50%);  
*Quararibea asterolepis* (C1-C5, image scaled 50%)



**Plate S26.** Melastomataceae:  
*Miconia*-type (A1-A6);  
Meliaceae: *Cedrela* sp. (B1-B3);  
*Trichilia* sp. (C1-C3)

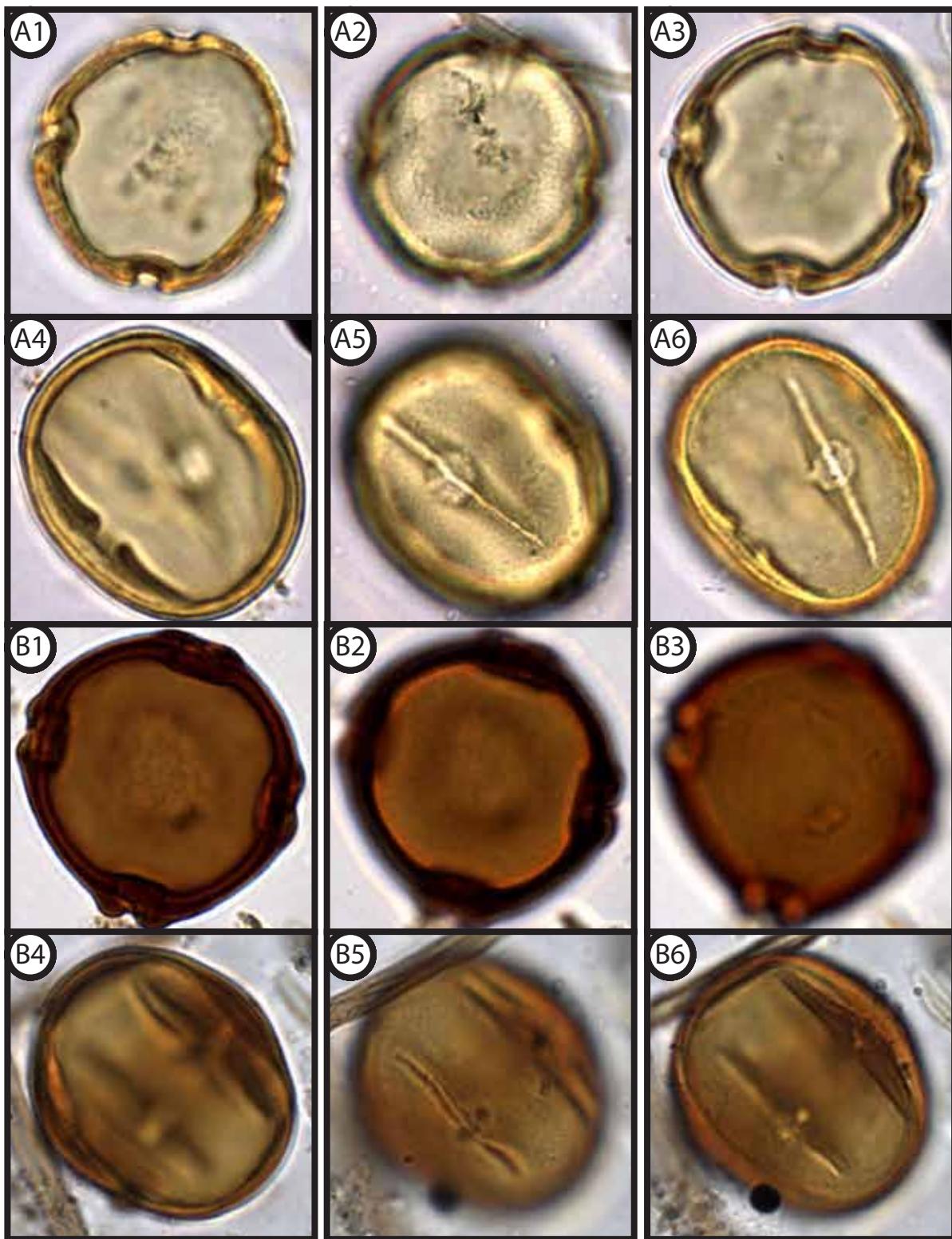
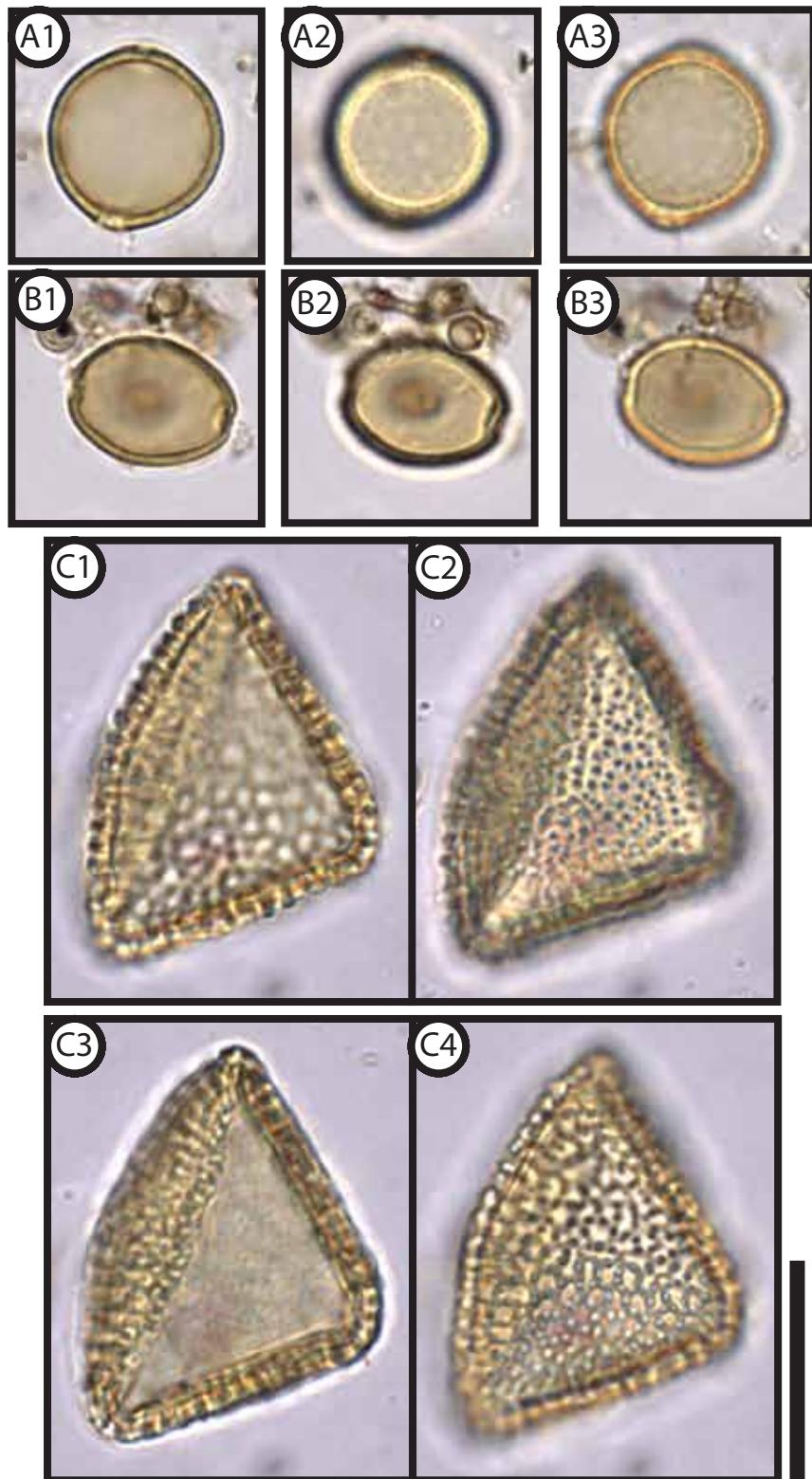
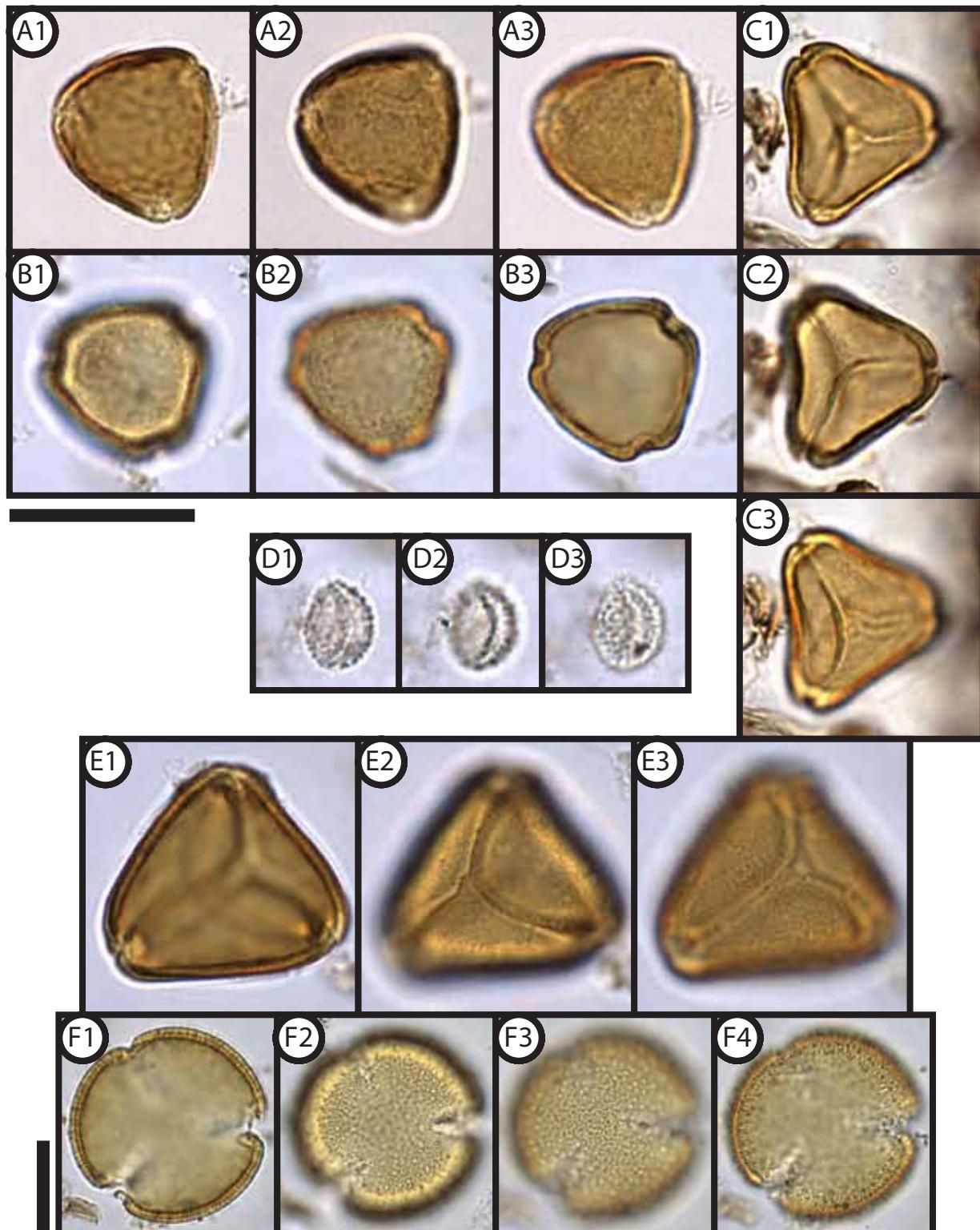


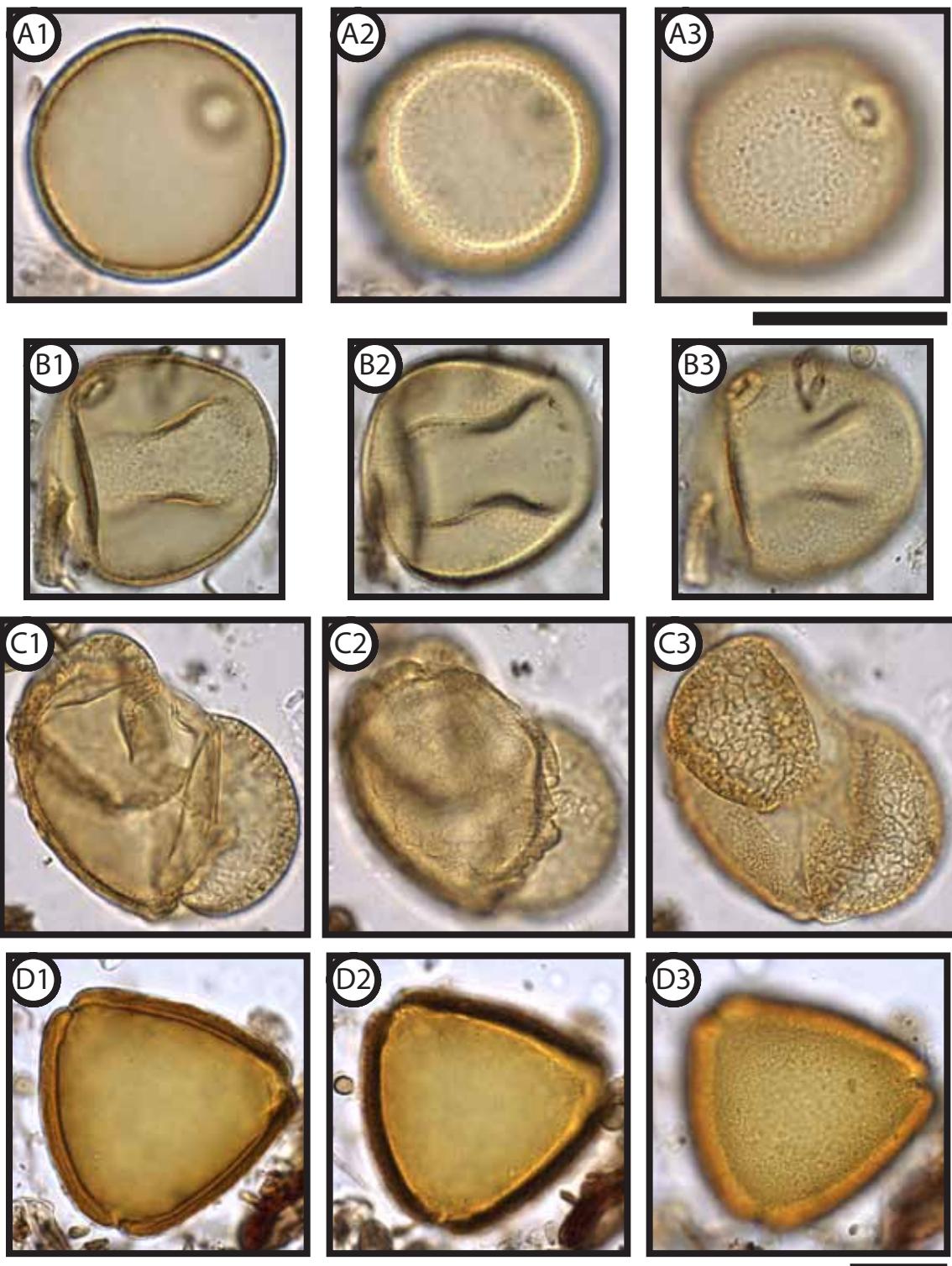
Plate S27. Meliaceae: *Trichilia* sp. (A1-A6); *Trichilia* sp. (B1-B6)



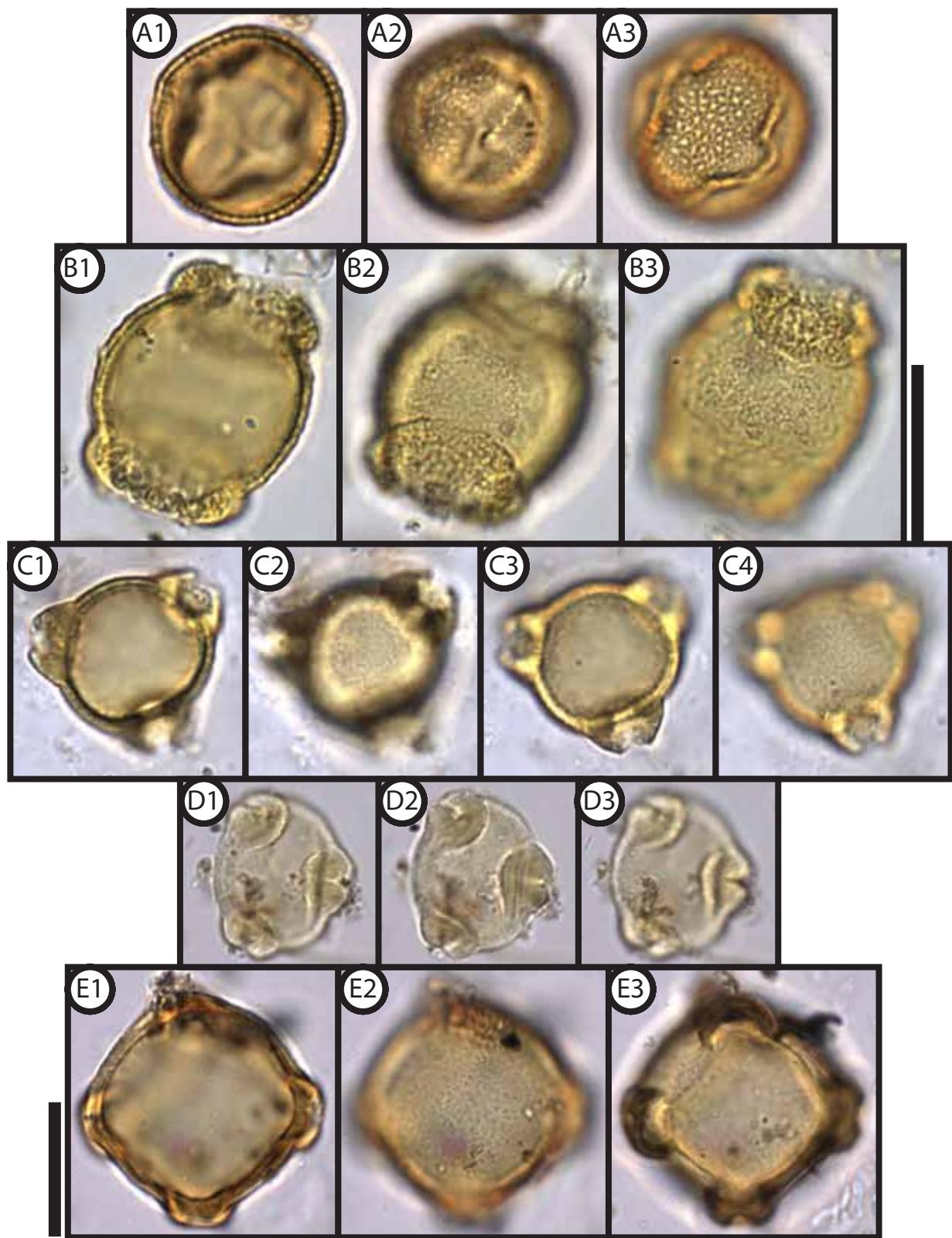
**Plate S28.** Moraceae/Urticaceae: *Brosimum*-type (A1-A3);  
*Ficus* sp. (B1-B3); Myristicaceae: *Virola* sp. (C1-C4)



**Plate S29.** Myrtaceae: *Eugenia coloradensis* (A1-A3); *Eugenia* sp. (B1-B3); *Eugenia* sp. (E1-E3); *Myrcia* sp. (C1-C3); Nyctaginaceae: *Guapira standleyana* (F1-F4, image scaled 50%); Piperaceae: *Piper* spp. (D1-D3)



**Plate S30.** Poaceae: unknown sp.1 (A1-A3); unknown sp.2 (B1-B3, image scaled 50%);  
Pinaceae/Podocarpaceae: unknown sp. (C1-C3, image scaled 50%);  
Proteaceae: cf. *Roupala montana* (D1-D3, image scaled 50%)



**Plate S31.** Rubiaceae: *Alseis* sp. (A1-A3); *Coussarea* sp. (B1-B3);  
*Faramea occidentalis* (C1-C4); *Faramea* sp. 2 (D1-D3); *Faramea* sp.3 (E1-E3)

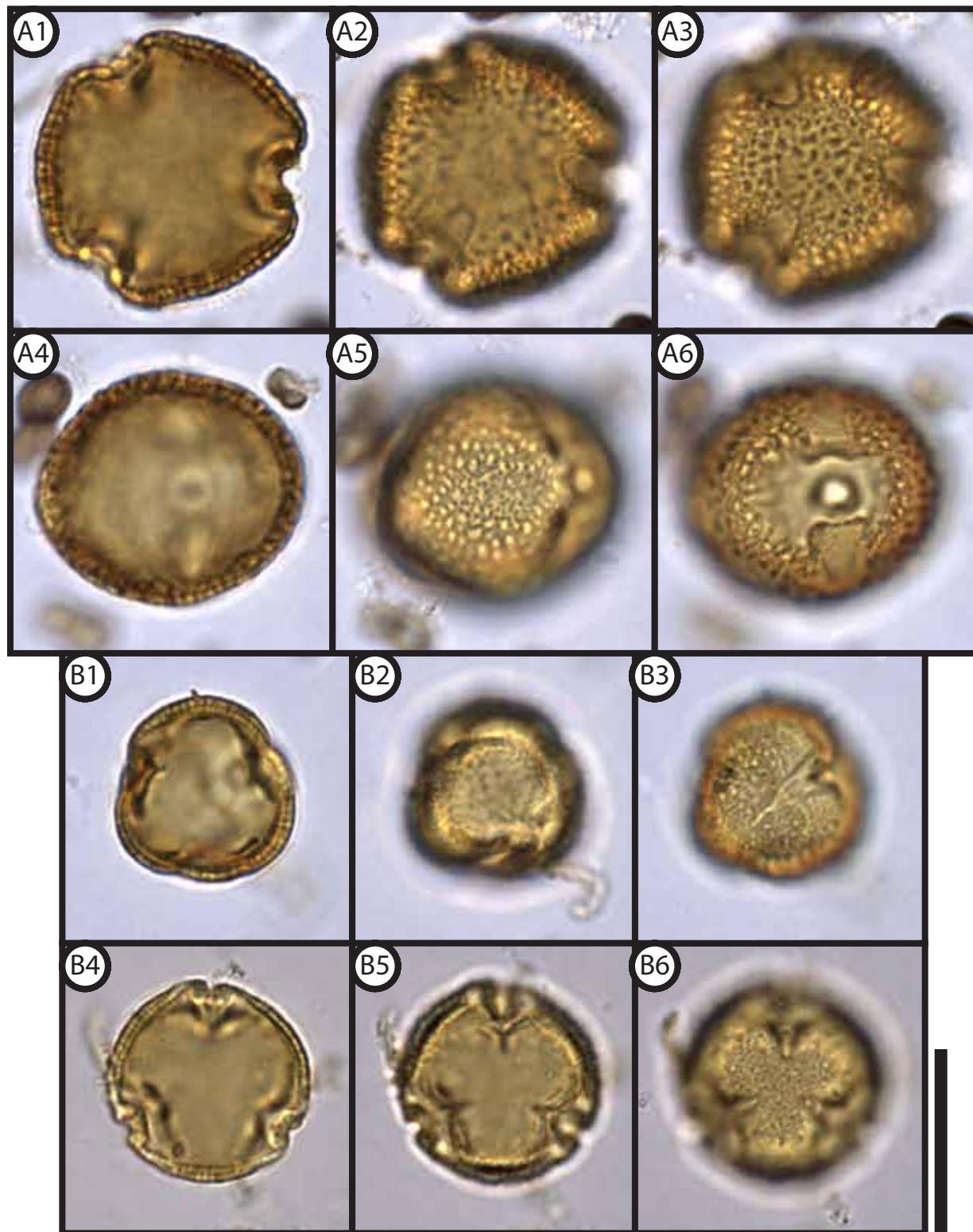
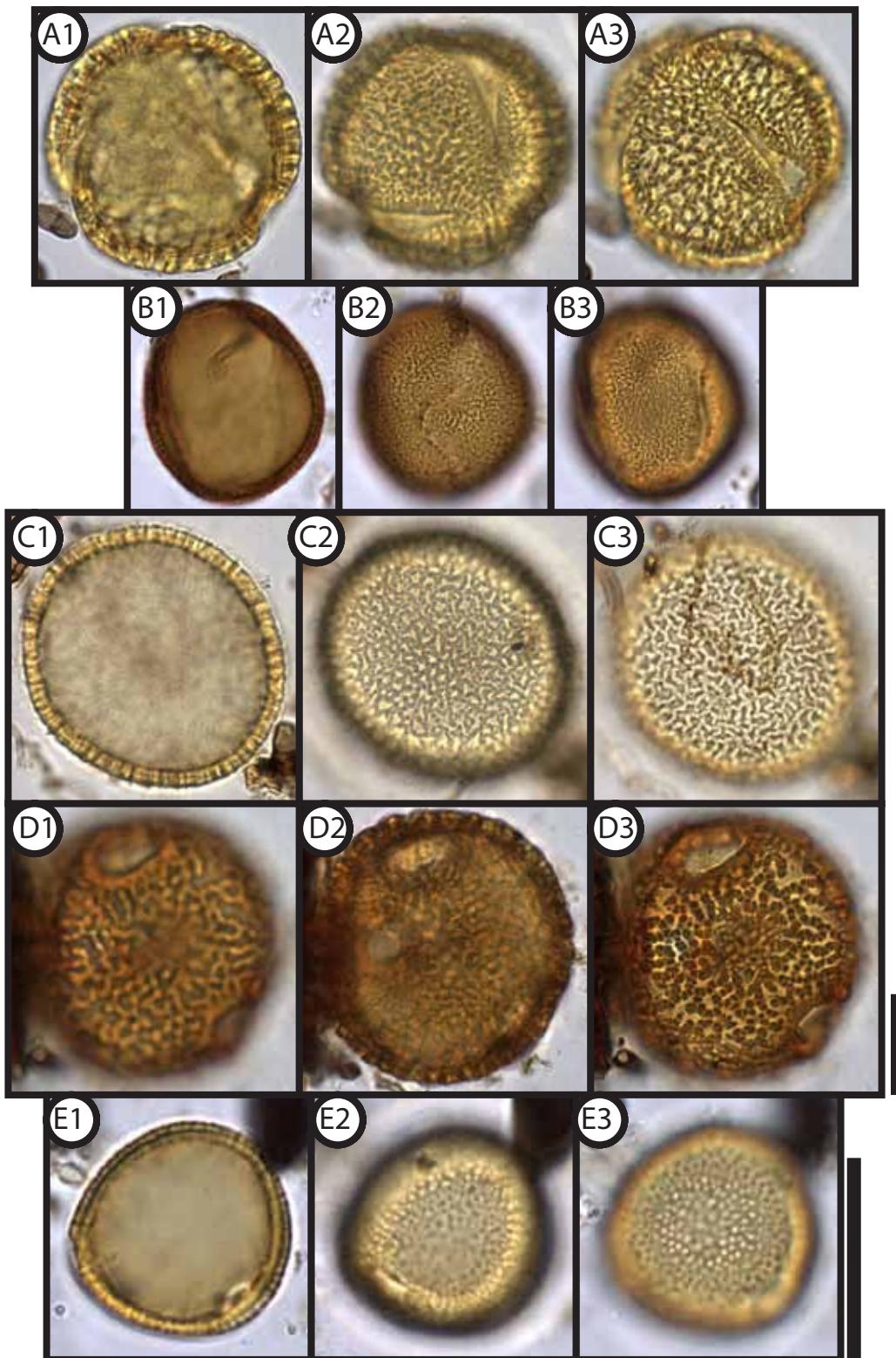
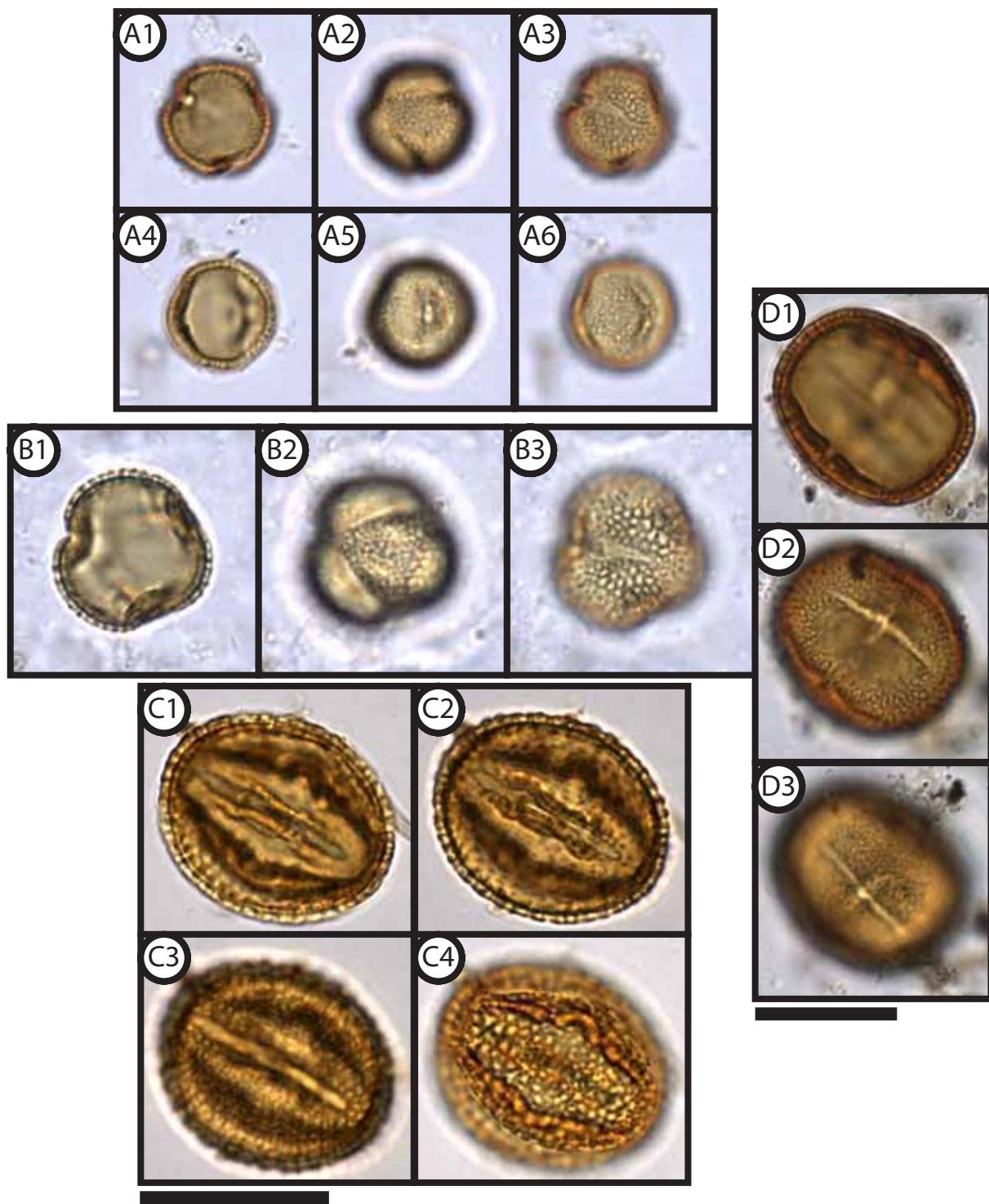


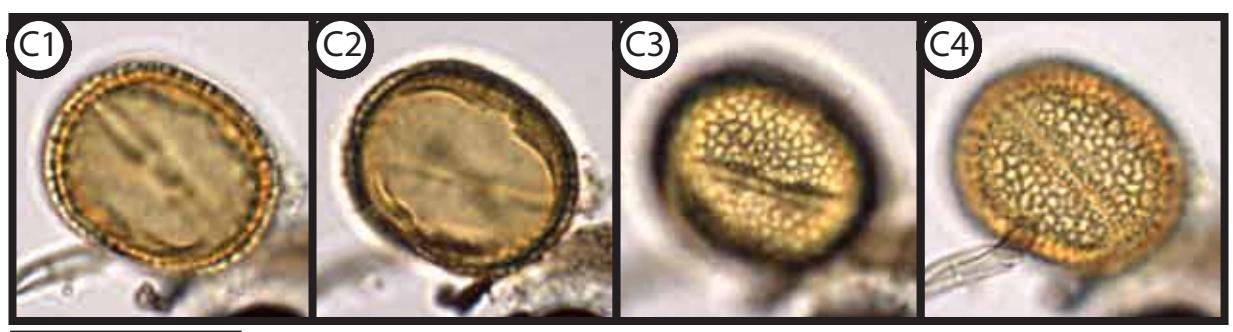
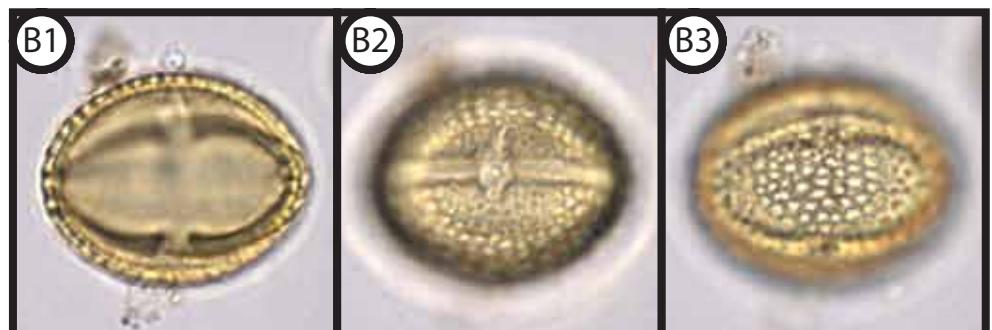
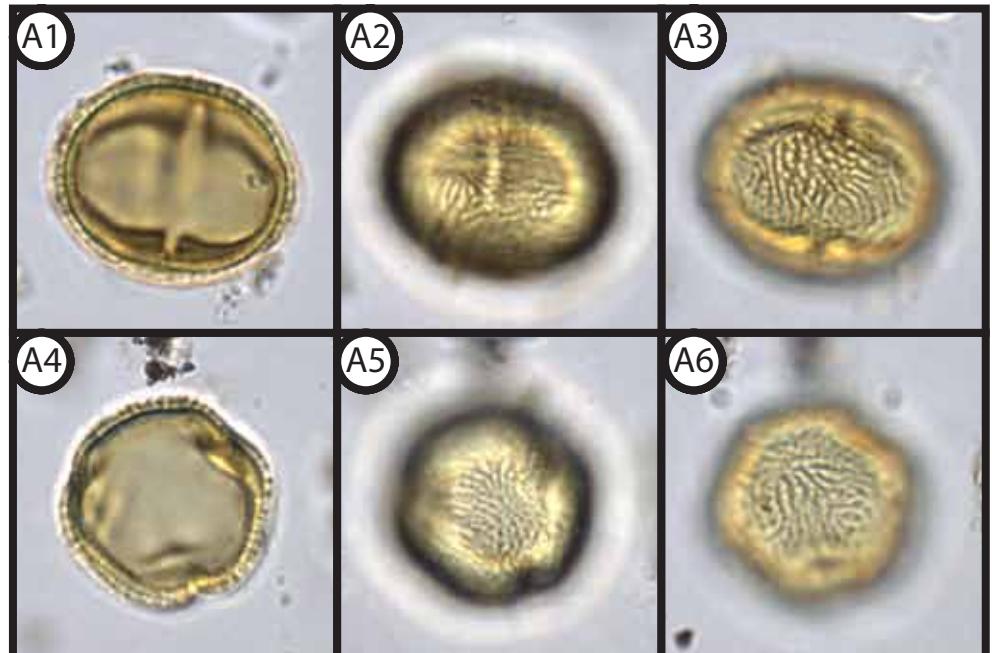
Plate S32. Rubiaceae: *Genipa* sp. (A1-A6); cf. *Ixora coccinea* (B1-B6)



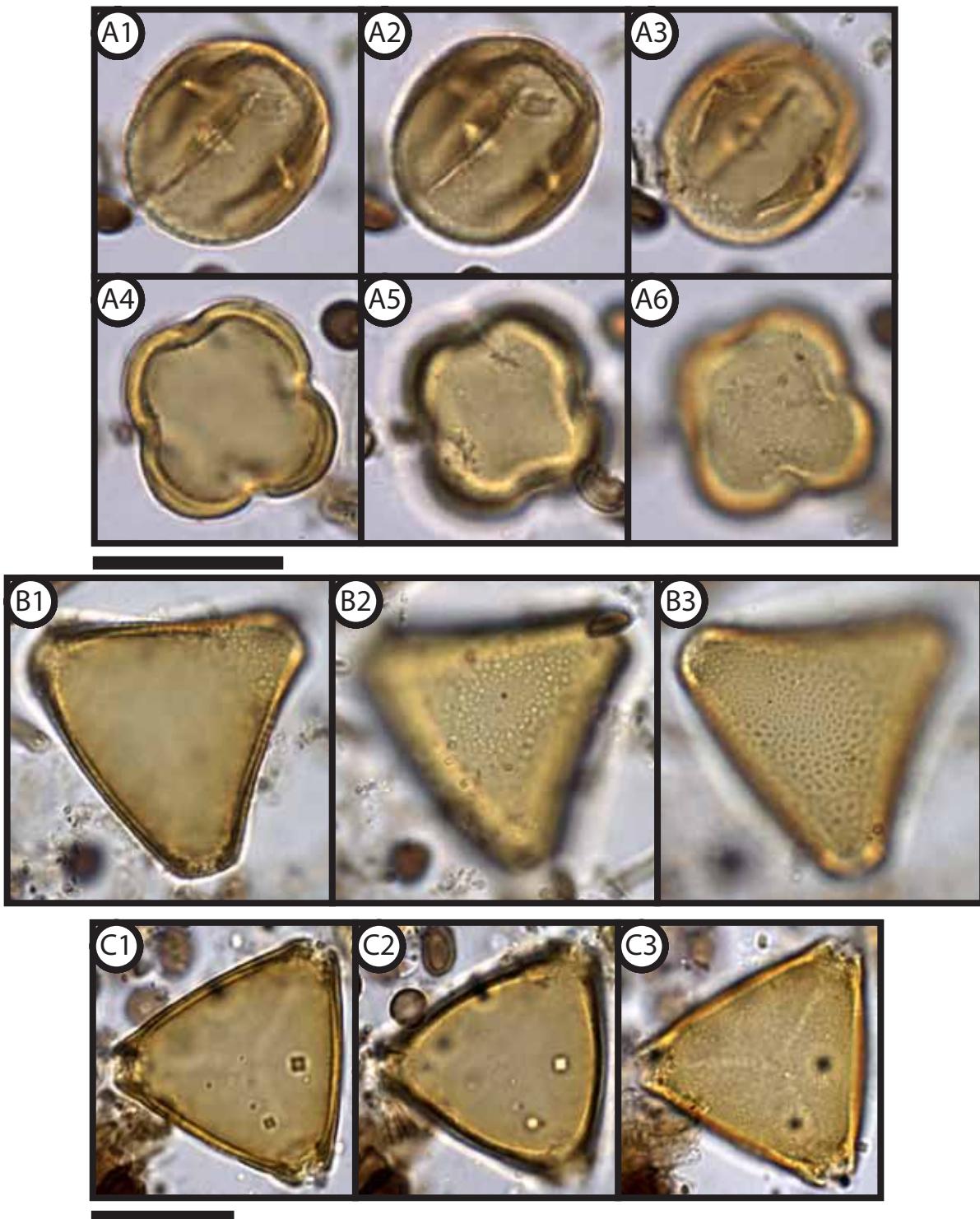
**Plate S33.** Rubiaceae: *Posoqueria* sp. (A1-A3, image scaled 50%);  
*Psychotria* sp.1 (B1-B3, image scaled 50%); *Psychotria* sp.2  
(C1-C3, image scaled 50%); *Sabicea* sp. (E1-E3); *Tocoyena pittieri*  
(D1-D3, image scaled 50%)



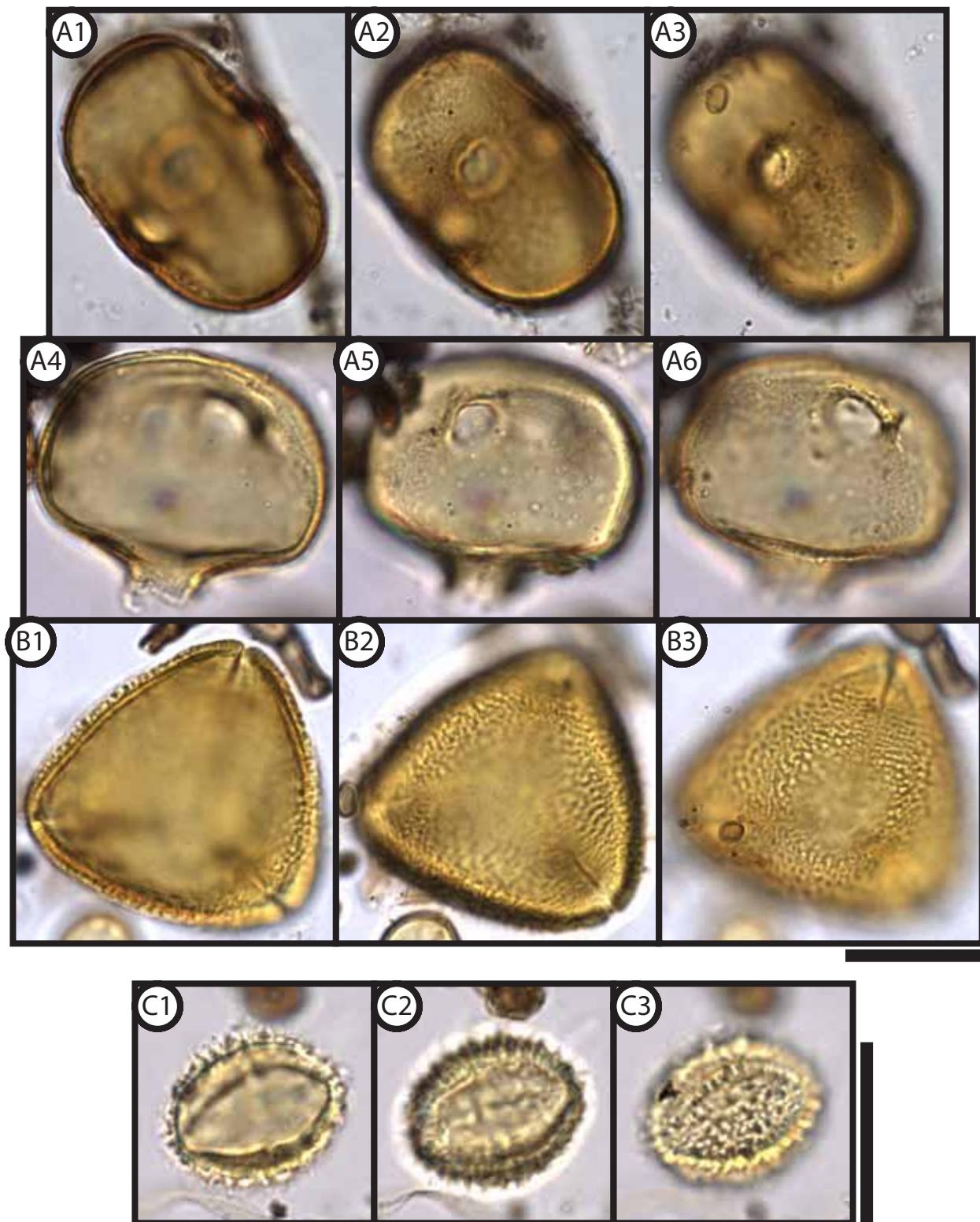
**Plate S34.** Rubiaceae: *Uncaria tomentosa* (A1-A6); cf. *Warszewiczia* sp. (B1-B3); Rutaceae: *Citrus* sp.1 (C1-C4); *Citrus* sp.2 cf. *grandis* (D1-D3, image scaled 75%)



**Plate S35.** Rutaceae: *Zanthoxylum* sp.1 (A1-A6); *Zanthoxylum* sp.2 (B1-B3);  
cf. Rutaceae spp. (C1-C4)



**Plate S36.** Salicaceae: cf. *Casearia* sp. (A1-A6);  
Sapindaceae: *Paulinia* sp. (B1-B3, image scaled 75%);  
*Serajnia* sp. (C1-C3, image scaled 75%)



**Plate S37.** Sapotaceae: *Pouteria* sp. (A1-A6); Simaroubaceae: *Quassia* sp. (B1-B3, image scaled 75%); *Simarouba* sp. (C1-C3)

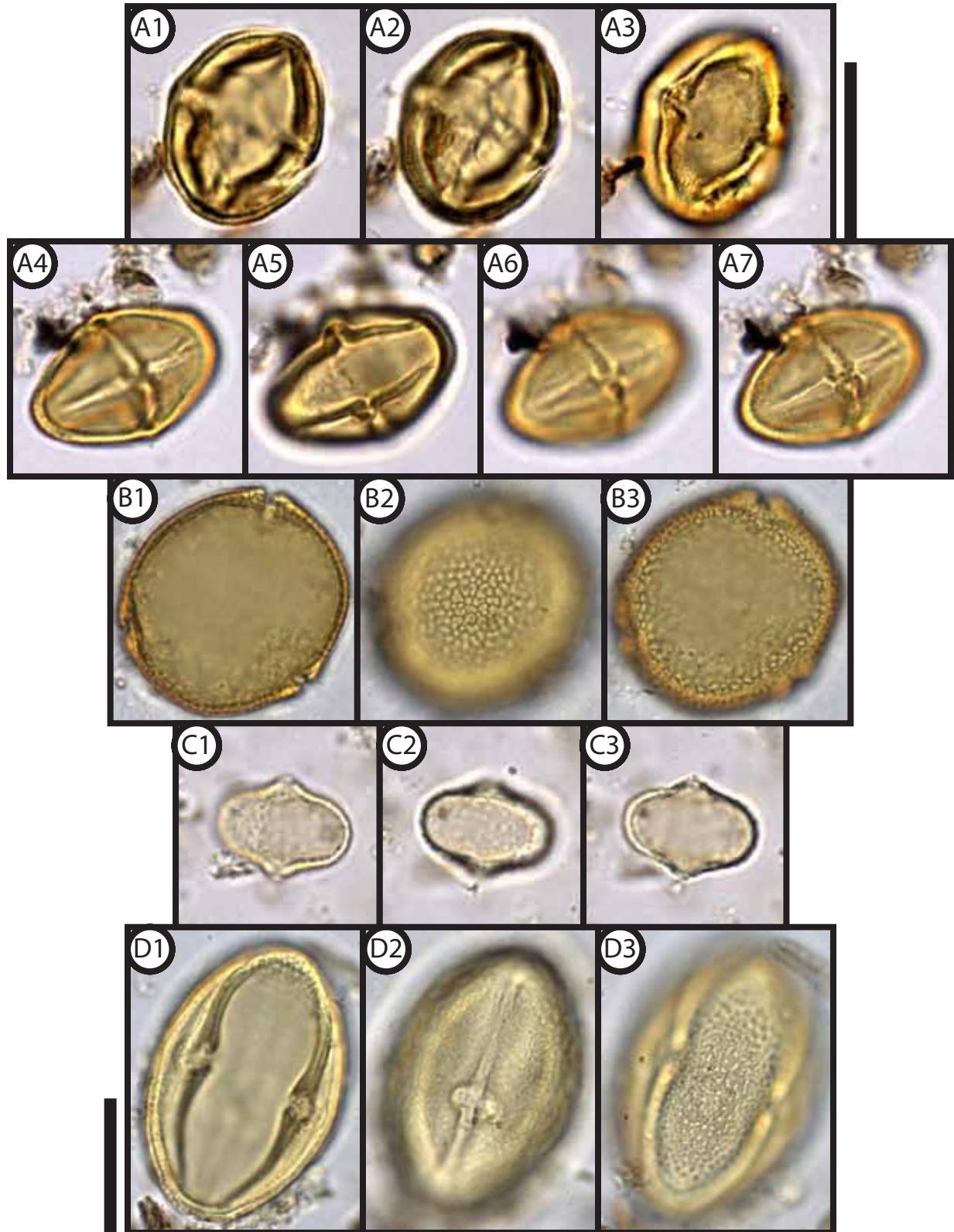
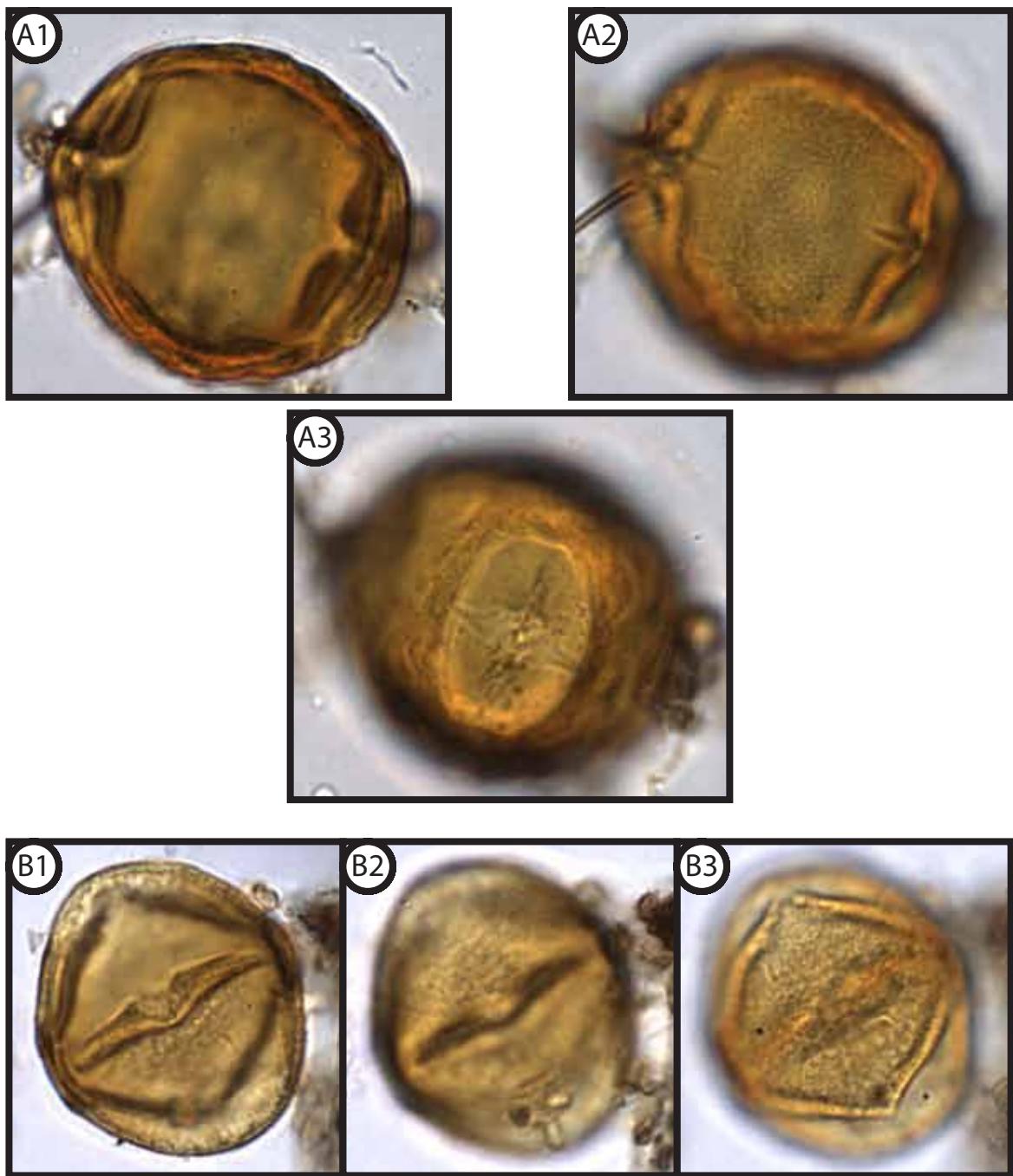


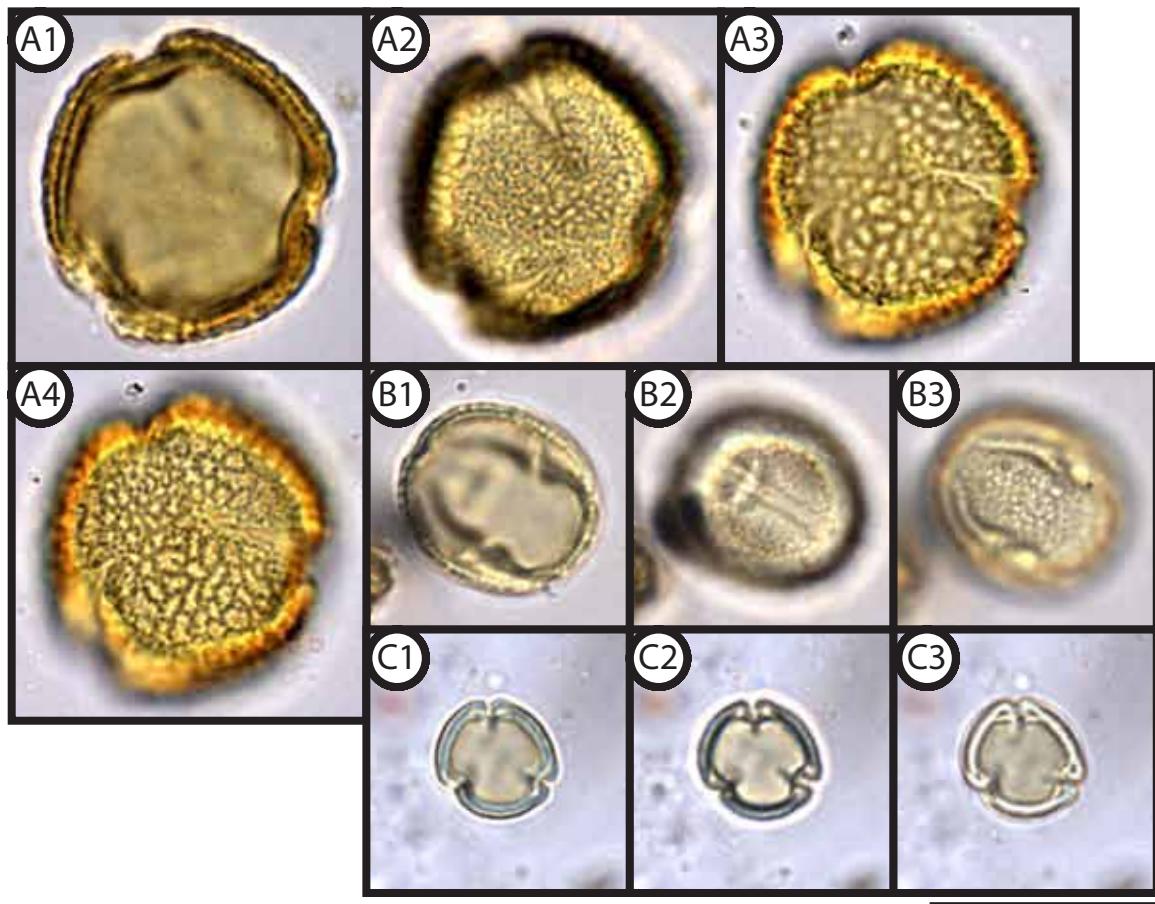
Plate S38. Solanaceae: *Solanum* spp. (A1-A7); Tiliaceae: cf. *Apeiba* sp.

(B1-B3, image scaled 75%); Urticaceae: *Cecropia* sp. (C1-C3);

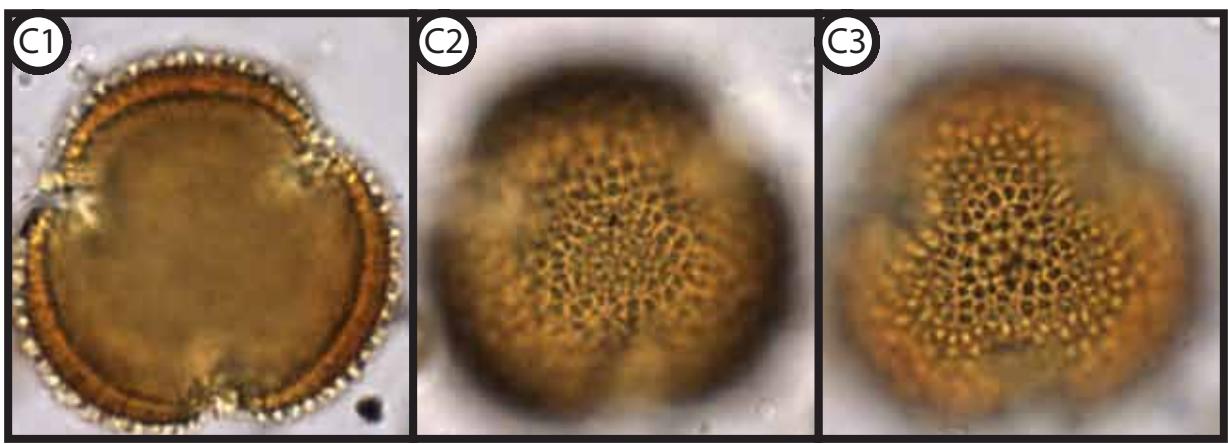
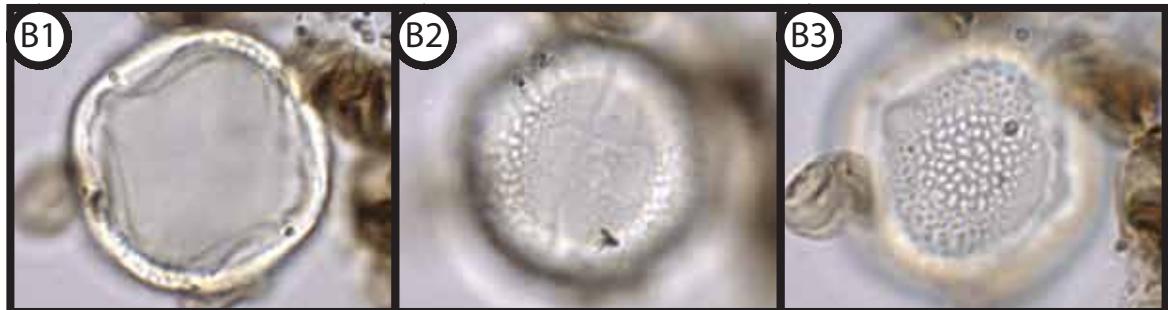
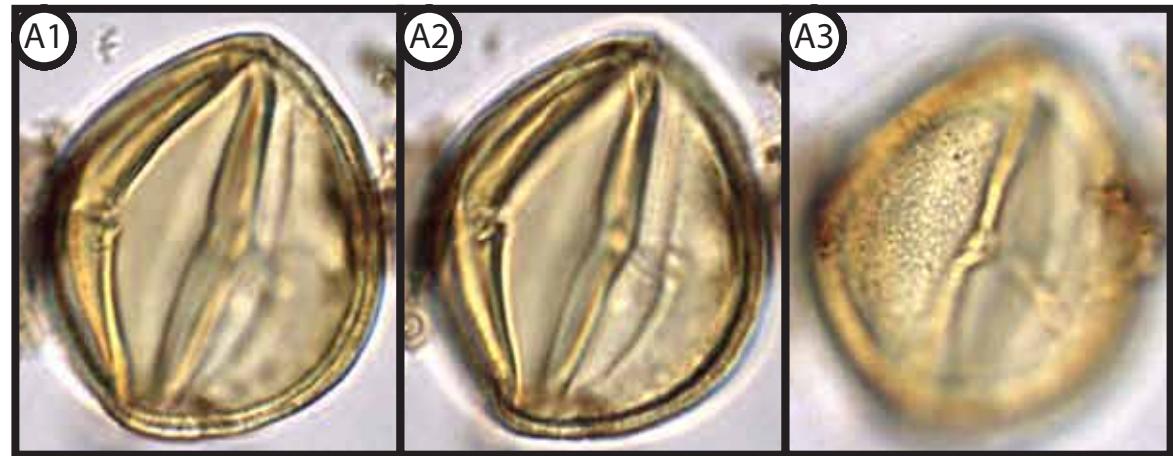
Vitaceae: *Cissus* sp. (D1-D3, image scaled 75%)



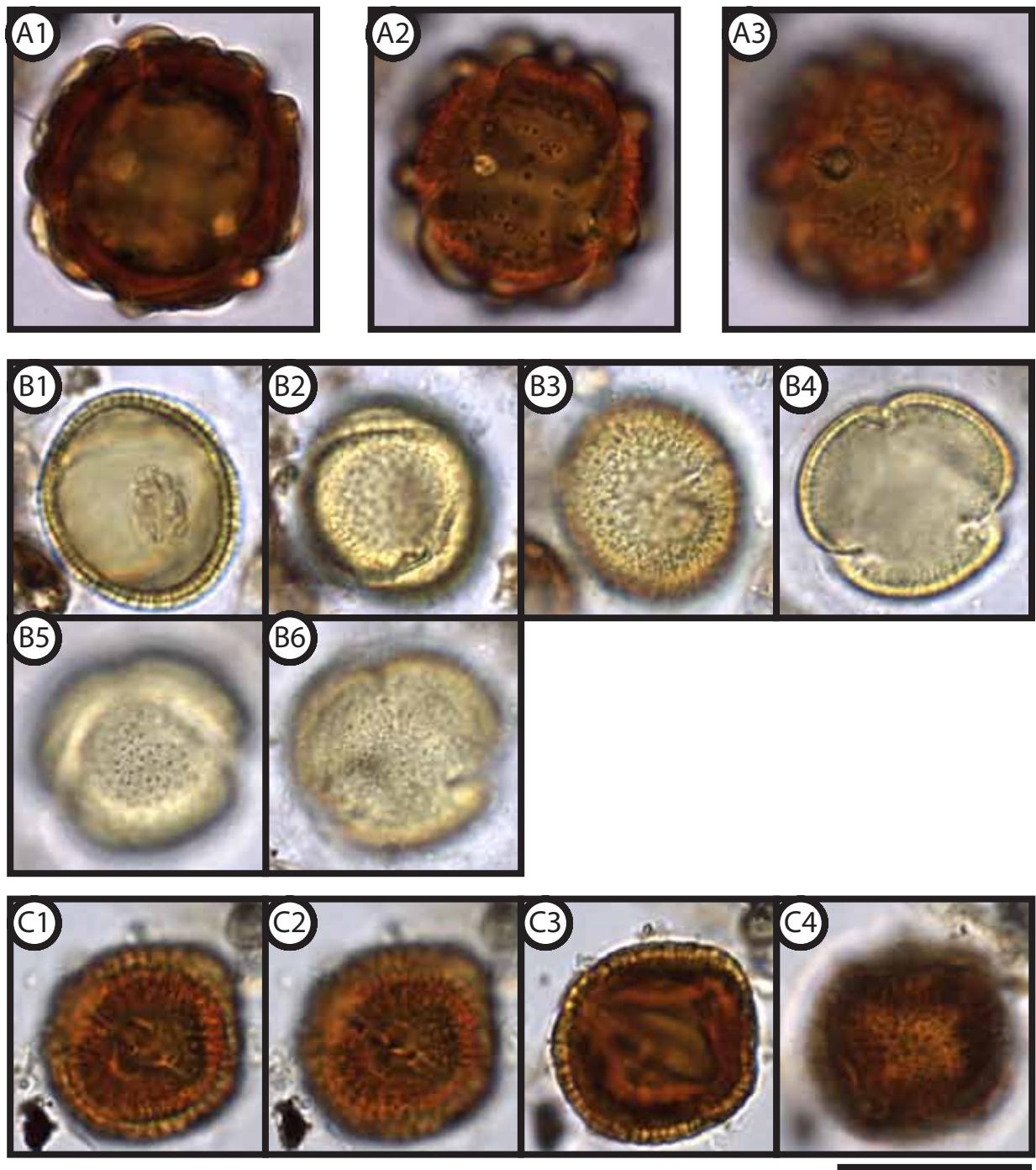
**Plate S39.** Vochysiaceae: *Vochysia* sp. (A1-A3); unknown sp. (B1-B3)



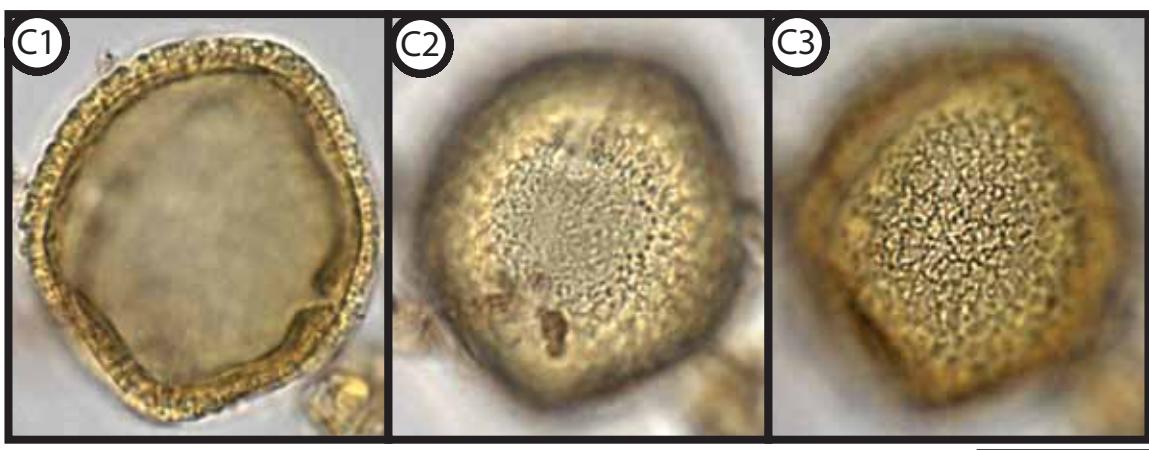
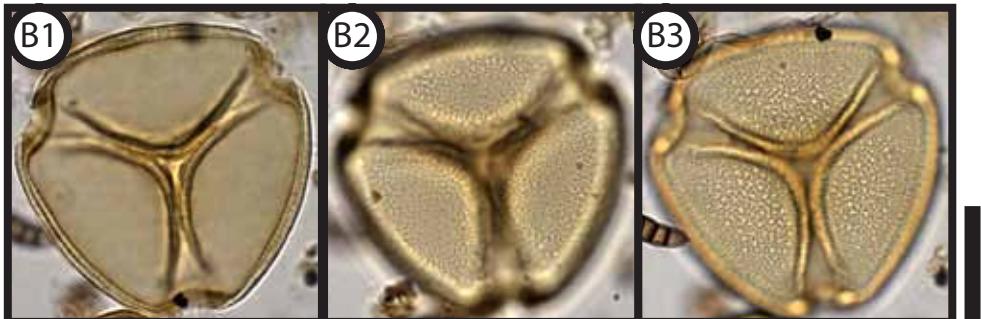
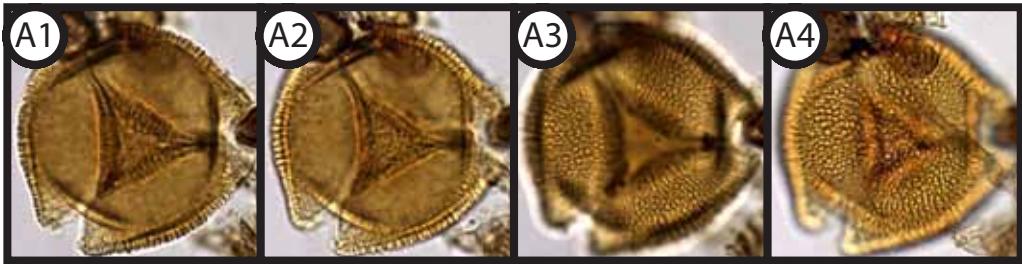
**Plate S40.** unknown sp./cf. *Vismia* sp. (A1-A4); unknown sp./cf. Rubiaceae spp. (B1-B3); unknown sp./cf. Ochnaceae: *Cespedezia* sp. (C1-C3)



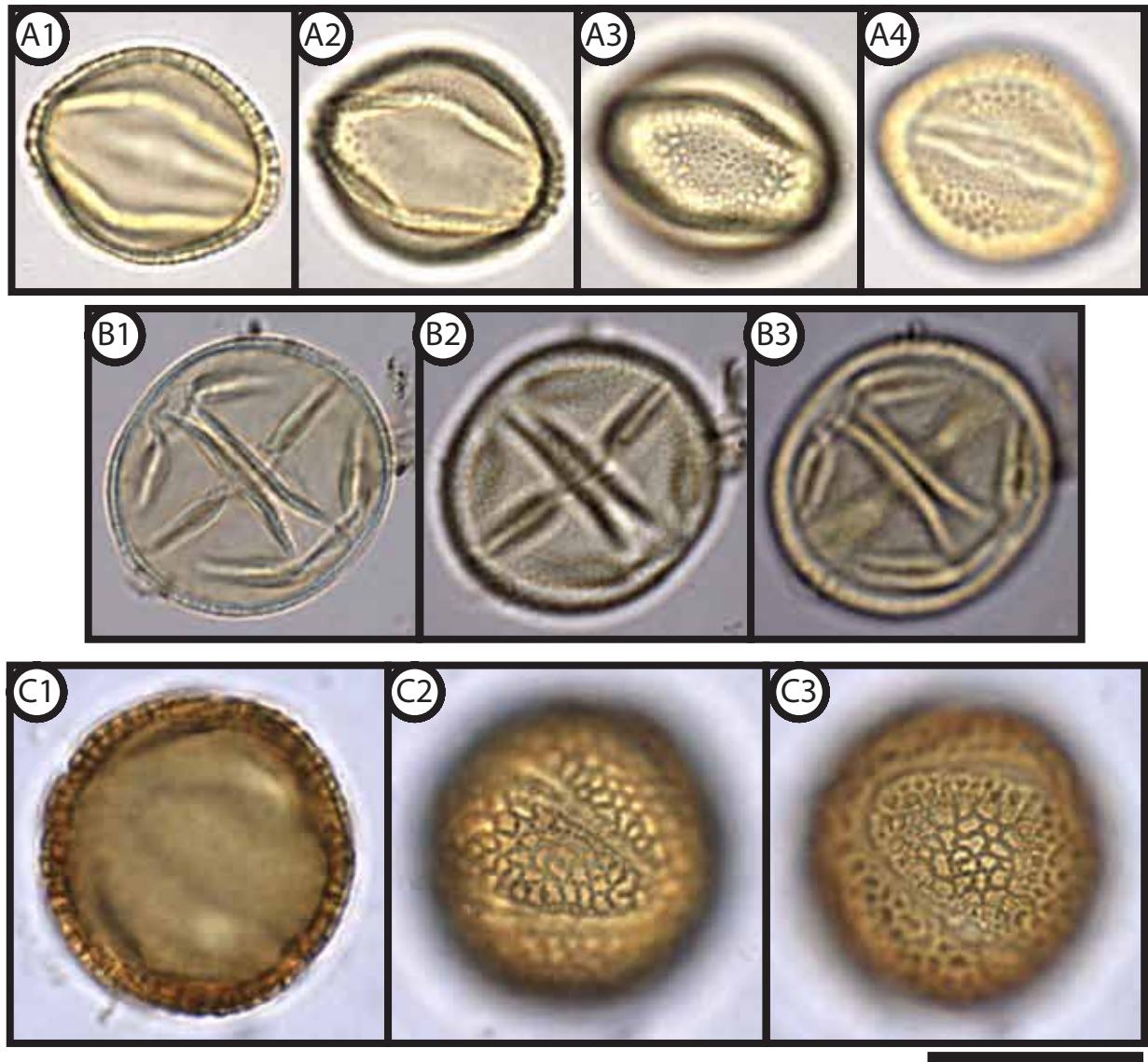
**Plate S41.** unknown sp. (A1-A3); unknown sp. (B1-B3); unknown sp. (C1-C3)



**Plate S42.** unknown sp./aff. Malpighiaceae: *Tetrapteris* sp. (A1-A3); unknown sp. (B1-B6); unknown sp./aff. Rubiaceae sp. (C1-C4)



**Plate S43.** unknown sp. (A1-A4, image scaled 50%);  
unknown sp. (B1-B3, image scaled 50%);  
unknown sp. (C1-C3, image scaled 75%)



**Plate S44.** unknown sp. (A1-A4) unknown sp. (B1-B3);  
unknown sp./cf. Lamiaceae: *Hyptis* sp. (C1-C3)



Plate S45. unknown sp. (A1-A3); unknown sp./cf. Sterculiaceae: *Melochia* sp. (B1-B5)